

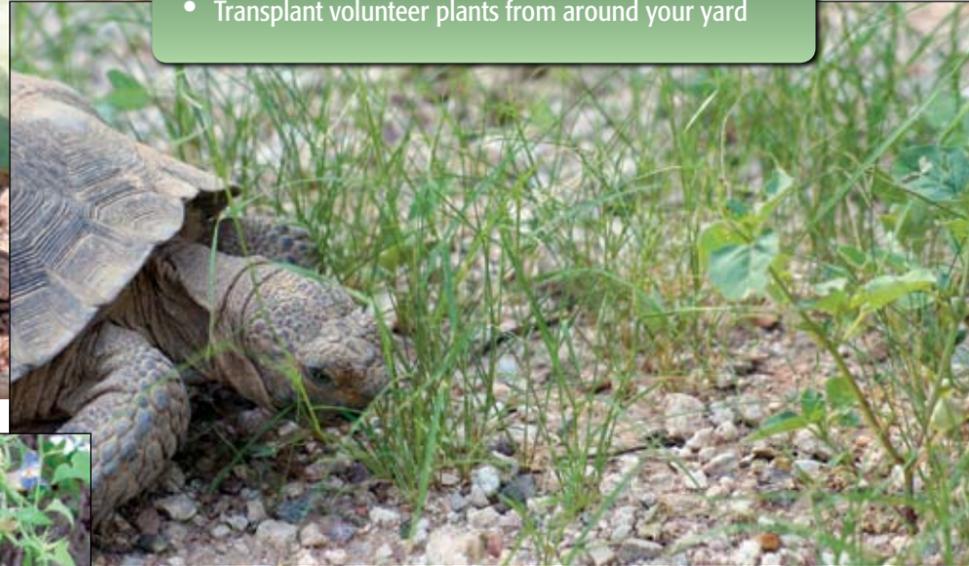


The best way to keep captive animals healthy is to mimic their natural environment.

Trailing 4-o'clock (above)

### Where to Get Native Plants

- Check [aznps.org](http://aznps.org) and click on Sources for Native Plants
- Buy native seeds or collect them from your friends
- Ask for native plants at your favorite plant retailer
- Transplant volunteer plants from around your yard



Summer rains trigger fresh, succulent, annuals to sprout. Many of these unwanted "weeds" are native plants that make excellent tortoise food like the needle grama grass and spiderling pictured here.

By landscaping your tortoise habitat to mimic the Sonoran Desert, you will allow your tortoise to follow its instincts, season to season, in meeting its nutritional needs.

Many nonnative landscape plants are invasive in our desert. These invaders are threatening wild tortoises by crowding out their favorite plants and fueling intense fires that tortoises and native desert plants cannot survive.

### Getting Started

The key to a successful natural tortoise habitat is space. We recommend at least 324 square feet (approx. 18 ft by 18 ft). You will need enough room to try a variety of food plants as your tortoise teaches you which plants it prefers at different times of the year. As you learn which plants it likes best, you will need to plant enough of them to keep up with its appetite. Choose the fastest growing plants for most of your plantings. These plants will adapt well and stand up to frequent browsing. It's also a good idea to plant a selection of your tortoise's favorite plants in an area the tortoise cannot access so you always have a backup food source. Avoid using herbicides and pesticides in your yard so you can offer clippings and weeded plants to your tortoise.

### Nutritional Needs

Native grasses are higher in fiber than most leafy plants and an important part of an adult tortoise diet. Younger tortoises need the extra proteins available from leafy plants.

### Plant Care

New plants should be protected from your tortoise for several weeks while they become established. Try planting in the fall after your tortoise has stopped eating for the winter. The fall is also the best time to sow spring wildflower seeds such as lupine and penstemon.



Snapdragon Vine

Desert adapted plants need little water once established, but regular watering will greatly speed growth. A drip system will help you keep the habitat surface dry and eliminate the chance of leaving the hose running.

Do not use chemical pesticides near tortoises. Most insects can be sprayed off with a hose. Caterpillars and leaf cutter ants can strip a plant of its leaves but most hardy

plants will rapidly grow back. Native plants generally do not need to be fertilized. If fertilizers are necessary, use only soil applied water soluble fertilizers.

Larger plants can be pruned down occasionally to encourage new growth within reach of the tortoise. Sprawling plants and vines can be planted in planters around the outside of the enclosure allowing the tortoise to feed on the dangling branches as they grow out but will not be able to munch it to the ground.

### Protection of Desert Tortoises and Native Plants

Both desert tortoises and Arizona native plants are protected in the wild. It is illegal to remove native plants or tortoises from the wild. Tortoises should never be handled in the wild unless it is to move them off a road. A handled tortoise will often urinate, losing much of its stored water, compromising its ability to survive until the next rainstorm.



Use temporary barriers to let plants rest or get established

### Resources

Visit the desert tortoise native plant demonstration garden at the Arizona Game and Fish Department office in Tucson, open 8-5, Mon-Fri 555 N. Greasewood Rd.

**Plants of Arizona** by Anne Orth Epple

**The Sonoran Desert Tortoise: Natural History, Biology and Conservation**  
Edited by Tom Van Devender

**Native Plants for Southwestern Landscapes** by Judy Mielke

**Desert Tortoise Adoption Program**  
Arizona-Sonora Desert Museum  
[www.desertmuseum.org/programs/tap.php](http://www.desertmuseum.org/programs/tap.php)

**Care of Captive Desert Tortoise**  
Arizona Game and Fish Department  
[www.azgfd.gov/tortoise](http://www.azgfd.gov/tortoise)

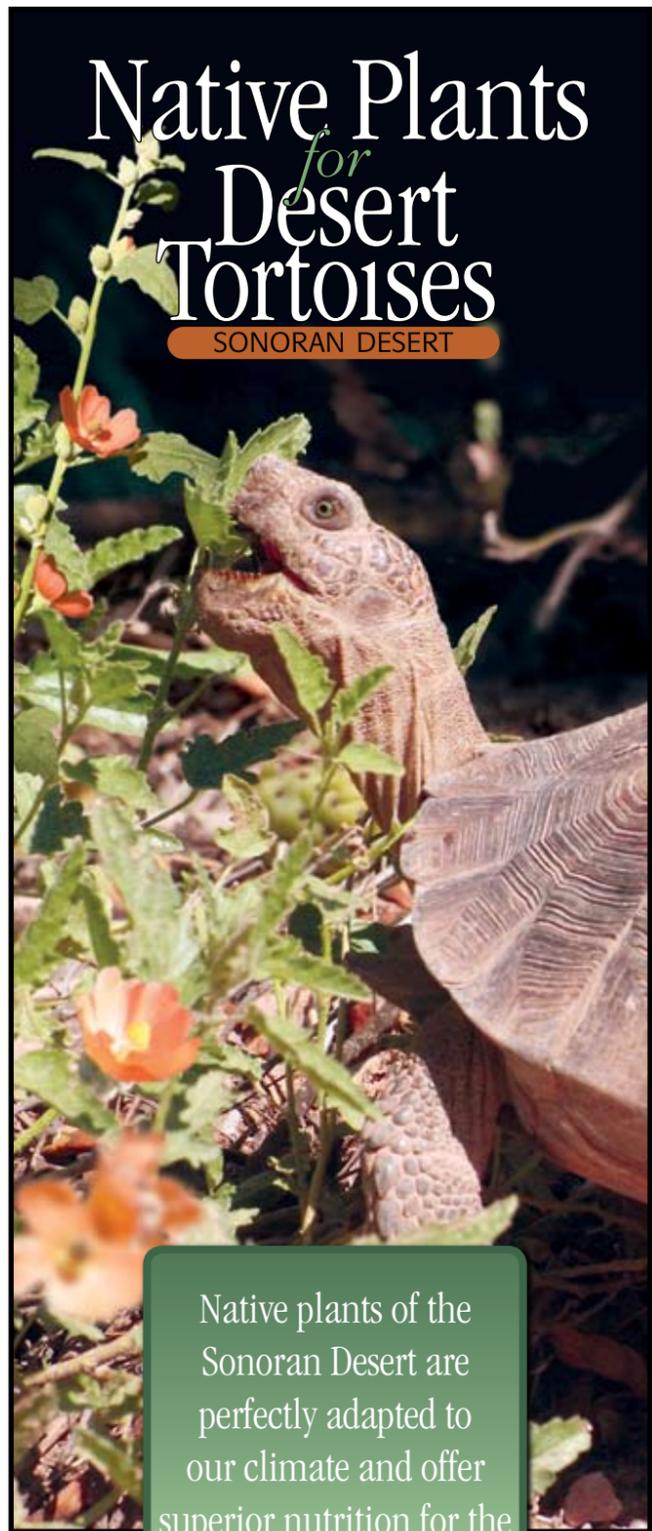
**The Wildlife-friendly Garden**  
Arizona Game and Fish Department  
[www.azgfd.gov/w\\_c/landscaping\\_wildlife\\_garden.shtml](http://www.azgfd.gov/w_c/landscaping_wildlife_garden.shtml)

**Answering Questions about Desert Tortoises**  
[www.deserttortoise.org/answeringquestions/chapter1.html](http://www.deserttortoise.org/answeringquestions/chapter1.html)

**AZ Native Plant Society** [www.aznps.org](http://www.aznps.org)

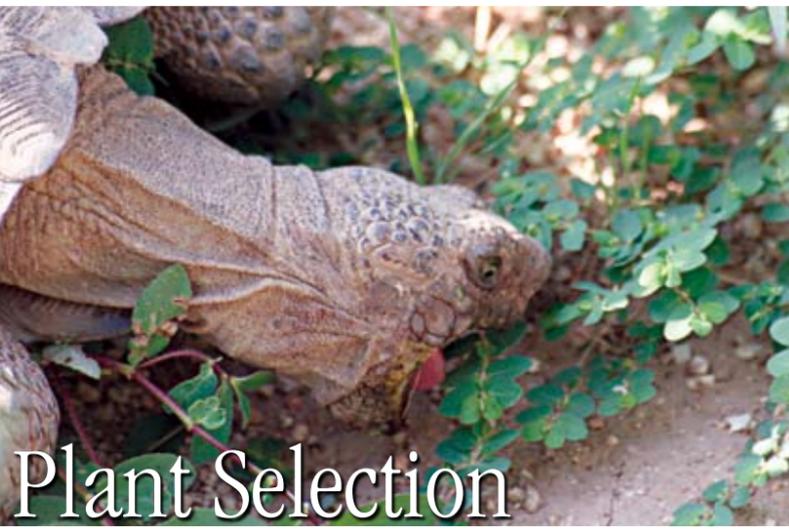


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Native plants of the Sonoran Desert are perfectly adapted to our climate and offer superior nutrition for the captive desert tortoise.

# Plant Selection



Common summer annuals like spurge, pictured here, can be harvested from around your yard or try transplanting into the tortoise enclosure.



Desert Willow

**Trees** Native trees provide shade for plants and tortoises. Many trees have seeds, fruit or flowers that tortoises need to supplement their diet. Consider planting a shade tree like the desert willow that drops most of its leaves in the winter to let plenty of sun through for spring shrubs and wildflowers.



**Cacti** Cactus can be dangerous to a tortoise in an enclosure where the animal will continually bump into it. We recommend cacti be planted outside of the enclosure where the fruit and flowers can be



Cactus fruit should be offered sparingly during the summer

harvested and offered to the tortoise. Replicate wild conditions by only offering prickly pear fruit to your tortoise in the summer when it's in season.



Rama del toro

**Grasses** Grasses are nutritionally important for adult tortoises. Plant a variety of grasses to determine which ones your tortoise likes best. Occasionally trim the grass to encourage tender new shoots.



Curly mesquite



(top) Lupine  
(middle) Summer poppy  
(bottom) Desert senna

## Vines

Native vines are vigorous growers and often respond well to frequent pruning by your tortoise.

## Shrubs

Large shrubs make excellent cover to protect the tortoise from summer sun and will drop flowers, seeds and fruit that your tortoise might relish.

Small shrubs are often favored by tortoises and their leaves and flowers are nutritionally important for young tortoises. These plants are usually hearty and will live for many years.

## Wildflowers

Many wildflowers are short-lived annuals. Some common native wildflowers like spiderling and spurge are considered weeds by many people. These are usually aggressive plants and can be your best choices for planting in the enclosure. Due to their fast growth and adaptability, they can take a lot of abuse from a hungry tortoise.

The two primary seasons for annuals are spring and summer. Spring annuals do most of their growing in late winter through early spring when your tortoise is not eating. This can make for a lush food source for your tortoise as it emerges from its den but these plants will fade fast with the increasing temperatures of late spring.

Summer annuals are usually triggered by the summer rainy season and can be a great source of tortoise forage through most of the summer. Water the seedlings and plants during dry spells to keep them growing strong.



Janusia vine is especially nutritious for tortoises



(top) Fairy duster  
(middle) Orange globe mallow  
(bottom) Pink globe mallow

Spiderling is a tough perennial that grows like a weed in many yards



Spiderling

## Arizona Native Plants Suitable for Sonoran Desert Tortoise Diet

This table includes plants that tortoises have been observed eating in the wild and in captivity. There are many more native plants tortoises will eat that are not on this list. Tortoises instinctively avoid plants that could make them sick so experiment with other native plants, but be aware that wild mushrooms can make captive tortoises very sick.

### Cacti (only offer fruit during fruiting season and should not be planted in enclosures)

Hedgehog cacti, <i>Echinocereus spp.</i>	perennial	full to part sun	slow growing
Pincushion cacti, <i>Mammillaria spp.</i>	perennial	full to part sun	slow growing
Prickly pear cacti, <i>Opuntia spp.</i>	perennial	full to part sun	moderate
Saguaro, <i>Carnegiea gigantea</i>	perennial	full to part sun	slow growing

### Grasses (best nutrition for adult tortoises)

Arizona cottontop, <i>Digitaria californica</i>	perennial	full to part sun	moderate
Bamboo muhly, <i>Muhlenbergia dumosa</i>	perennial	full to part sun	moderate
Blue grama, <i>Bouteloua gracilis</i>	perennial	full to part sun	moderate
Bush muhly, <i>Muhlenbergia porteri</i>	perennial	full to part sun	fast growing
Curly mesquite, <i>Hilaria belangeri</i>	perennial	full to part sun	moderate
Deer grass, <i>Muhlenbergia rigens</i>	perennial	sun/shade	fast growing
Fluffgrass, <i>Tridens pulchellus</i>	perennial	full sun	slow growing
Needle grama, <i>Bouteloua aristidoides</i>	summer annual	full to part sun	moderate
Sideoats grama, <i>Bouteloua curtipendula</i>	perennial	full to part sun	moderate
Slender grama, <i>Bouteloua repens</i>	perennial	full to part sun	moderate
Threeawn, <i>Aristida spp.</i>	perennial/annual	full to part sun	moderate
Vine mesquite, <i>Panicum obtusum</i>	perennial	full to part sun	fast growing

### Vines (fast growers producing lots of leaves)

Arizona grape ivy, <i>Cissus trifoliata</i>	perennial	sun/shade	fast growing
Janusia vine, <i>Janusia gracilis</i>	perennial	full sun	moderate
Native passionflower, <i>Passiflora spp.</i>	summer perennial	sun/shade	moderate
Snapdragon vine, <i>Maurandya antirrhiniflora</i>	perennial	sun/shade	fast growing

### Medium to large shrubs

Chuparosa, <i>Justicia californica</i>	perennial	full to part sun	fast growing
Creosotebush, <i>Larrea divaricata</i>	perennial	full to part sun	fast growing
Desert honeysuckle, <i>Anisacanthus thurberi</i>	perennial	full to part sun	fast growing
Desert lavender, <i>Hyptis emoryi</i>	perennial	full to part sun	slow growing
Ocotillo, <i>Fouquieria splendens</i>	perennial	full sun	slow growing
Ruellia, <i>Ruellia nudiflora</i>	perennial	full to part sun	moderate
Whiteball acacia, <i>Acacia angustissima</i>	perennial	full to part sun	moderate
Yellow trumpet flower, <i>Tecoma stans</i>	perennial	full to part sun	fast growing

## Small shrubs

Bladdermallow, <i>Herissantia crispa</i>	summer perennial	full to part sun	fast growing
Dalea, <i>Dalea spp.</i>	perennial	full to part sun	fast growing
Desert rose mallow, <i>Hibiscus coulteri</i>	summer perennial	full to part sun	fast growing
Fairy duster, <i>Calliandra eriophylla</i>	perennial	full to part sun	slow growing
Flattop buckwheat, <i>Eriogonum fasciculatum</i>	perennial	full to part sun	fast growing
Globe mallow, <i>Sphaeralcea spp.</i>	perennial	full to part sun	moderate
Hibiscus, <i>Hibiscus biseptus</i>	summer perennial	full to part sun	fast growing
Indian mallow, <i>Abutilon spp.</i>	summer perennial	full to part sun	fast growing
Rama del toro, <i>Dicliptera resupinata</i>	perennial	sun/shade	fast growing
Rock rose mallow, <i>Hibiscus denudatus</i>	summer perennial	full to part sun	fast growing

## Wildflowers (small, leafy, flowering plants)

Arizona lupine, <i>Lupinus arizonicus</i>	spring annual	full to part sun	moderate
Birdfoot lotus, <i>Lotus humistratus</i>	summer annual	full sun	moderate
Desert Chicory, <i>Rafinesquia neomexicana</i>	spring annual	full to part sun	moderate
Desert lupine, <i>Lupinus sparsiflorus</i>	spring annual	full to part sun	moderate
Desert rock pea, <i>Lotus rigidus</i>	spring annual	full to part sun	moderate
Desert senna, <i>Senna covesii</i>	summer perennial	full sun	fast growing
Dogweed, <i>Thymophylla pentachaeta</i>	summer annual	full sun	moderate
Elegant lupine, <i>Lupinus concinnus</i>	spring annual	full to part sun	moderate
Esteve's pincushion, <i>Chaenactis stevioides</i>	spring annual	full to part sun	moderate
Evening primrose, <i>Oenothera spp.</i>	summer perennial	full to part sun	moderate
Lizard tail, <i>Gaura parviflora</i>	summer annual	full to part sun	fast growing
Locoweed, <i>Astragalus nuttalianus</i>	summer annual	full sun	moderate
Penstemon, <i>Penstemon spp.</i>	spring perennial	sun/shade	moderate
Owl's clover, <i>Castilleja exserta</i>	spring annual	full to part sun	moderate
Showy four o'clock, <i>Mirabilis multiflora</i>	summer perennial	full to part sun	moderate
Silver puffs, <i>Uropappus lindleyi</i>	spring annual	full to part sun	moderate
Spiderlings, <i>Boerhavia spp.</i>	summer ann/per	full sun	fast growing
Spurges, <i>Euphorbia spp.</i>	summer ann/per	full to part sun	fast growing
Strigose birdfoot trefoil, <i>Lotus strigosus</i>	spring annual	full to part sun	moderate
Summer poppy, <i>Kallstroemia grandiflora</i>	summer annual	full sun	fast growing
Trailing 4-o'clock, <i>Allionia incarnata</i>	summer perennial	full sun	fast growing
Wooly plantain, <i>Plantago patagonica</i>	spring annual	full to part sun	moderate

**Annual:** Plants come up from seed each year. Plant seeds of Spring annuals in the Fall/Winter. Plant seeds of Summer annuals in the Spring.

**Perennial:** Plants persist all year. Some are long lived and some live only a few years.